non-conductive ball would not short out the wires and would therefor not register a "high" signal thereby identifying a second player. More than two players can be accommodated by employing ball sets of differing resistivities and employing resistance measurement, as described above, to identify which of three or more players scored the hit resistivity

In at least one example described above, reference is made to throwing a ball or other projectile at the display screen with a successful hit resulting in the player's previously recorded image being projected in the hit target area, e.g. a square in the tic-tac-toe game. An extension of this is to merge the real and virtual worlds further by changing the projectile as it hits the screen into some themed object (such as a flaming tomahawk, a spear, etc.) which maintains the same relative speed and trajectory as the real thrown projectile. A similar example would be video golf games wherein the player hits the ball and at the moment it strikes the projection screen, a "virtual" (projected) golf ball is seen to travel through the air on the same relative trajectory as the real ball. In a further modification, the projectile does not need to be a ball—it in itself can be a themed object to distort differences between real and virtual worlds. Similarly, the virtual projectile can completely change into some different item, such as a pie, which would strike and mess up the player's projected image in the target area (or in a remote display area). In another example, the target areas could represent construction and the projectile would change into the construction item that would allow the player to build a virtual environment, e.g. the elements of a building with progressively added blocks or a garden with progressively added flowers, sun, grass, etc. As a further valiant, the virtual space can be made to move past the thrown object when it strikes the screen. This would provide the sensation of traveling through the virtual world from the projectile's perspective. Non-topographical transformations can also be imposed on the thrown projectile at the moment of impact with the projection screen, such as a change in acceleration or an explosion.

The invention has been described in detail with particular reference to certain preferred embodiments thereof, but it will be understood that variations and modifications can be effected within the spirit and scope of the invention.

What is claimed is:

1. Interactive video game apparatus comprising:

a video display panel having a multi-dimensional array of contact responsive elements responsive to impingement of projectiles tossed by player participants to register a characteristic of the contact between the projectile and the display panel;

a video display projector for displaying a video game on the display panel, the game elements being related to the position of the contact responsive elements on the display panel such that such registered characteristic of contact by the projectile with the display panel contributes to scoring in the displayed video game;

player operated video display element creation means for allowing player participants in the game to create and display customized video elements for display in conjunction with display of the video; and

means for displaying one or more of said customized display elements in association with contact between said projectiles and the contact sensitive elements of the display panel.

2. The apparatus of claim **1** wherein said creation means comprises an image capture and recording means.

3. The apparatus of claim **2** wherein said image capture means is coupled to said video display projector for projection of said image on the display panel while said image is being composed prior to capture and recording.

4. The apparatus of claim **1** wherein said customized display element comprises a virtual representation of the thrown projectile.

5. The apparatus of claim **2** wherein said customized display element includes an image of the player and an additional element that interacts with the displayed player image.

6. The apparatus of claim **1** wherein said customized display element is a topographical transformation of the thrown projectile into another representation different from said projectile.

7. The apparatus of claim **1** further including means for differentiation of thrown projectiles to associate each projectile with the player responsible for throwing the projectile.

8. The apparatus of claim **1** wherein said projectiles have different resistivities associated with respective different players, said video game apparatus further includes resistance measuring apparatus and said video display panel includes a mesh of spaced-apart conductive wires positioned over the display panel and coupled to resistance measuring apparatus whereby a projectile impinging on said mesh can be associated with a particular player by measuring resistivity of said projectile.

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